

Title (en)  
OXIDE COATED CUTTING INSERT

Title (de)  
SCHNEIDEEINSATZ MIT OXIDÜBERZUG

Title (fr)  
PLAQUETTE POUR OUTIL DE COUPE REVÊTUE D OXYDE

Publication  
**EP 2262925 A4 20130821 (EN)**

Application  
**EP 09718212 A 20090303**

Priority  
• SE 2009000120 W 20090303  
• SE 0800539 A 20080307

Abstract (en)  
[origin: WO2009110831A1] The present invention relates to a cutting tool insert comprising a body of a hard alloy of cemented carbide, cermet, ceramics, cubic boron nitride based material or high speed steel a hard and wear resistant coating, comprising one or several layers, at least one of which an (Al,Cr)2O3 layer is applied. This invention is particularly useful for machining of steel and stainless steel. The coating, with a total thickness of 2 - 20 µm comprises one or several layers, at least one of which is an (Al,Cr)2O3 layer with a thickness of 1 - 5 µm having a corundum phase crystalline structure and a composition (Al<sub>1-y</sub>Cr<sub>y</sub>)2O3 with 0.5 ≤ y ≤ 1. The 2O3 layer is further characterized in having a fiber texture with rotational symmetry in the direction of the coated surface normal with an inclination angle, f, of the basal planes relative to the coated surface normal or the inclination angle, f, for the highest peak in the pole plot with 20° < f < 55° as determined by, e.g., electron back scattering diffraction (EBSD) or x-ray diffraction (XRD).

IPC 8 full level  
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C-Set (source: EP US)  
1. **C04B 41/5033 + C04B 41/4529 + C04B 41/5031**  
2. **C04B 41/52 + C04B 41/4529 + C04B 41/5063 + C04B 41/5068**  
3. **C04B 41/52 + C04B 41/4529 + C04B 41/5062 + C04B 41/5063 + C04B 41/522**  
4. **C04B 41/52 + C04B 41/4529 + C04B 41/5031 + C04B 41/5033**  
5. **C04B 41/52 + C04B 41/4529 + C04B 41/5063 + C04B 41/5068 + C04B 41/524**  
6. **C04B 41/52 + C04B 41/4529 + C04B 41/5062 + C04B 41/5063 + C04B 41/522 + C04B 41/524**  
7. **C04B 41/009 + C04B 35/00**  
8. **C04B 41/009 + C04B 35/5831**

Citation (search report)  
• [Y] JP 2005028484 A 20050203 - MITSUBISHI MAT KOBE TOOLS CORP, et al  
• [Y] US 2004121147 A1 20040624 - MORIKAWA YASUOMI [JP], et al  
• [E] EP 2098612 A2 20090909 - SECO TOOLS AB PUBL [SE]  
• [E] WO 2009110830 A1 20090911 - SECO TOOLS AB [SE], et al  
• [E] EP 2141257 A2 20100106 - SECO TOOLS AB [SE]  
• See also references of WO 2009110831A1

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